FIG. 1

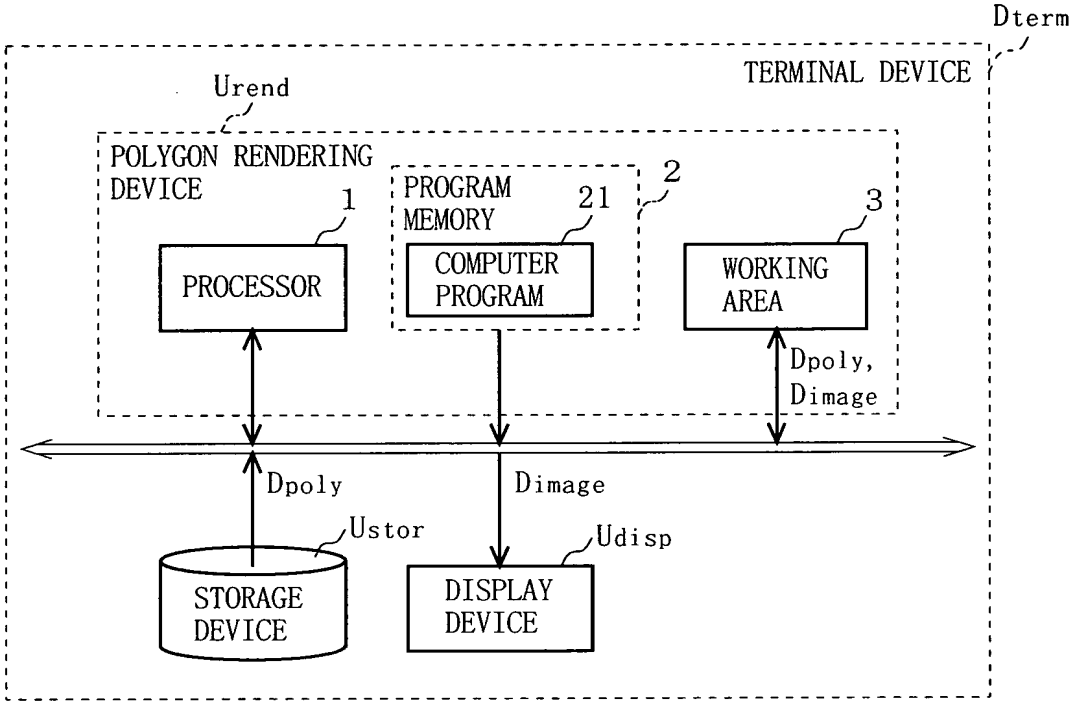

Dterm
TERMINAL DEVICE
Urend
POLYGON RENDERING DEVICE
1
PROCESSOR
PROGRAM MEMORY
21
2
COMPUTER PROGRAM
3
WORKING AREA
Dpoly, Dimage
Dpoly
Dimage
Ustor
Udisp
STORAGE DEVICE
DISPLAY DEVICE

FIG. 2

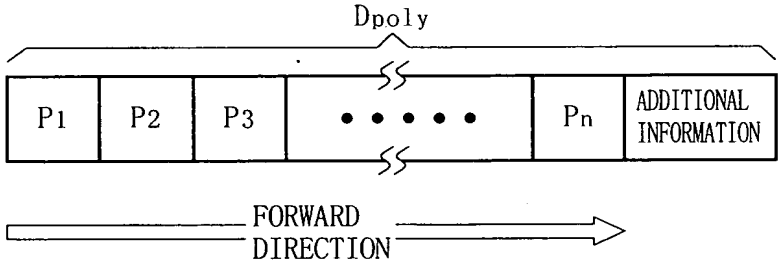

Dpoly
P1
P2
P3
Pn
ADDITIONAL INFORMATION
FORWARD DIRECTION

FIG. 3

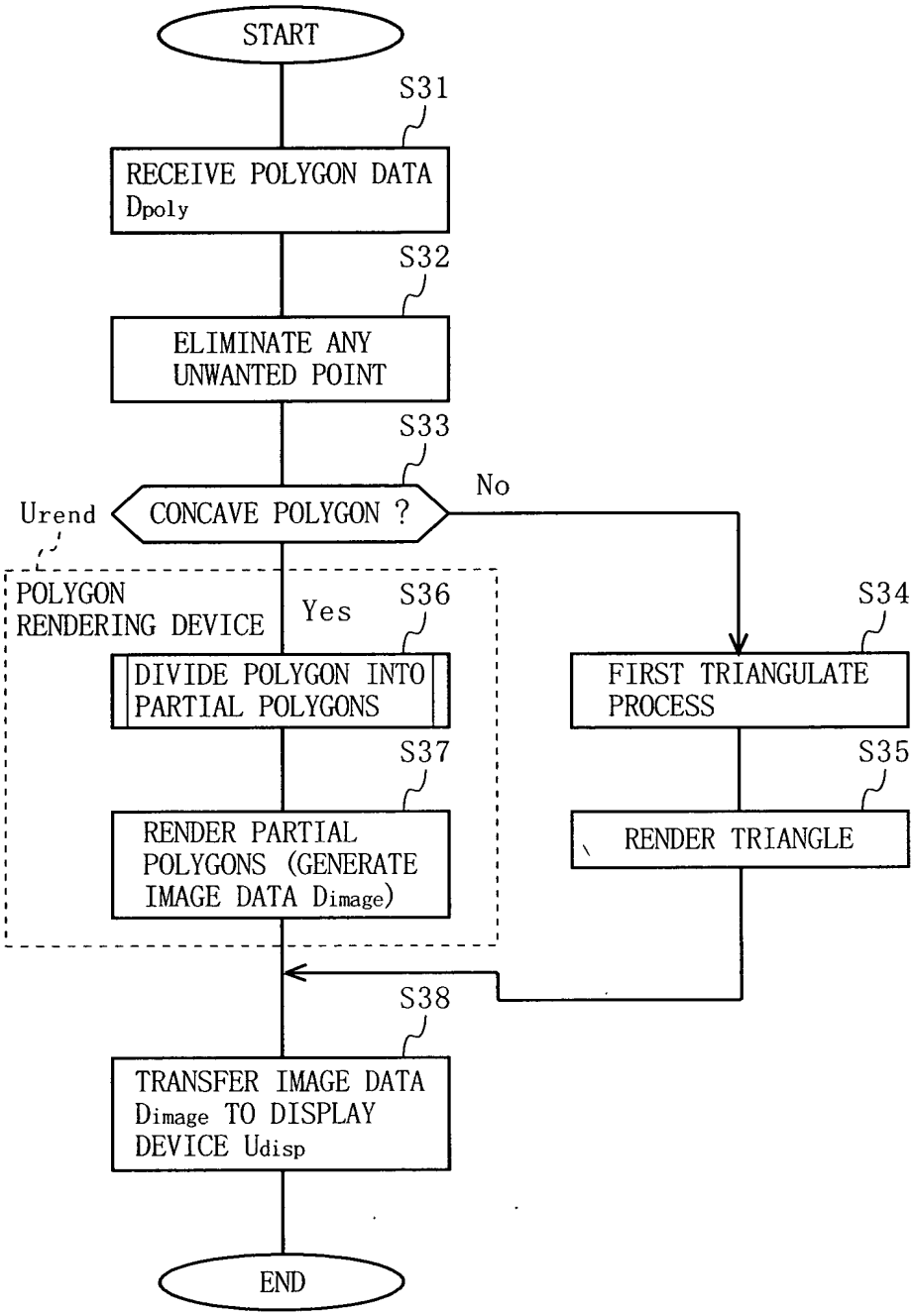

START
S31
RECEIVE POLYGON DATA Dpoly
S32
ELIMINATE ANY UNWANTED POINT
S33
Urend
CONCAVE POLYGON ?
No
Yes
POLYGON RENDERING DEVICE
S36
DIVIDE POLYGON INTO PARTIAL POLYGONS
S37
RENDER PARTIAL POLYGONS (GENERATE IMAGE DATA Dimage)
S34
FIRST TRIANGULATE PROCESS
S35
RENDER TRIANGLE
S38
TRANSFER IMAGE DATA Dimage TO DISPLAY DEVICE Udisp
END

FIG. 4

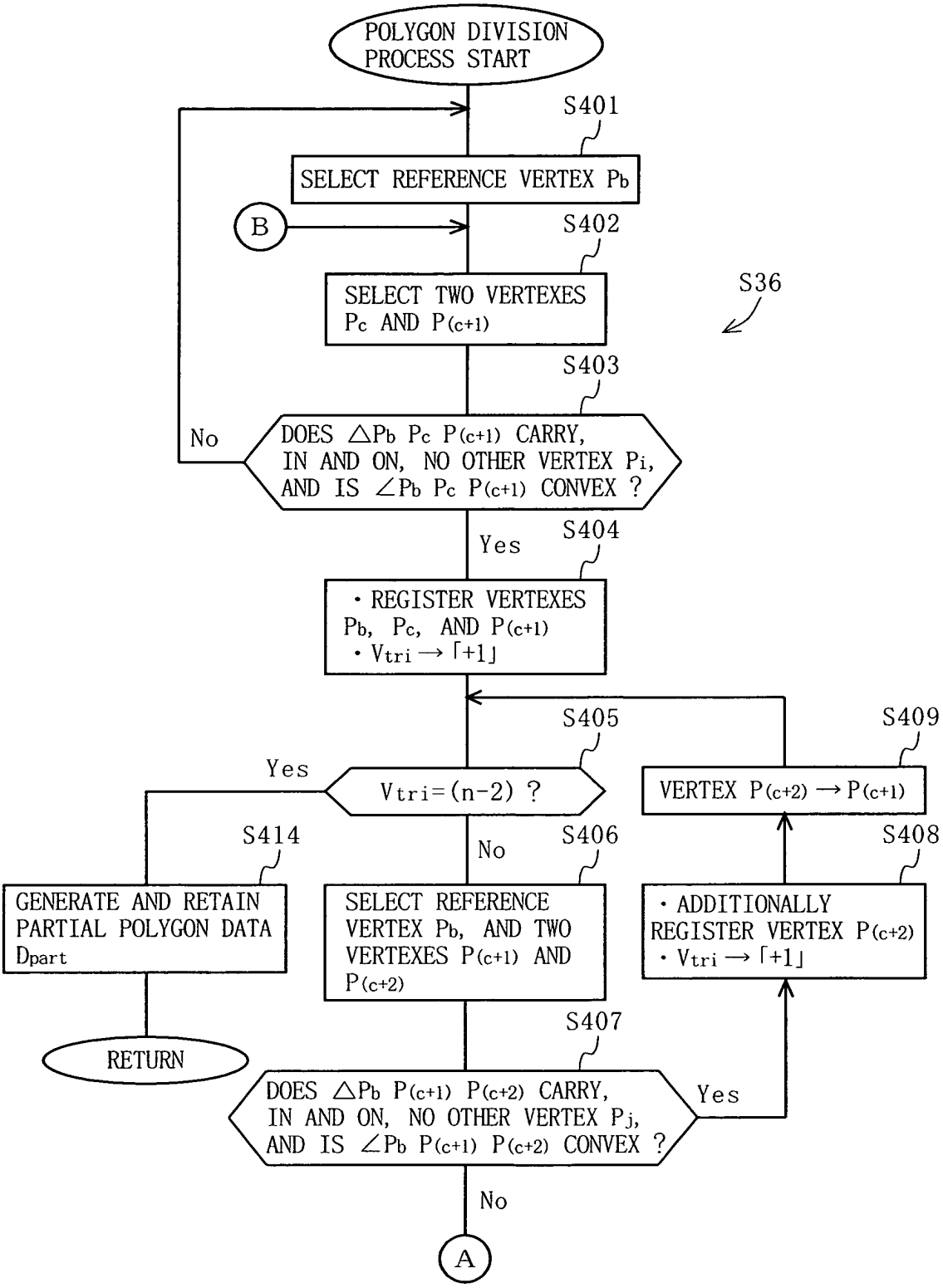
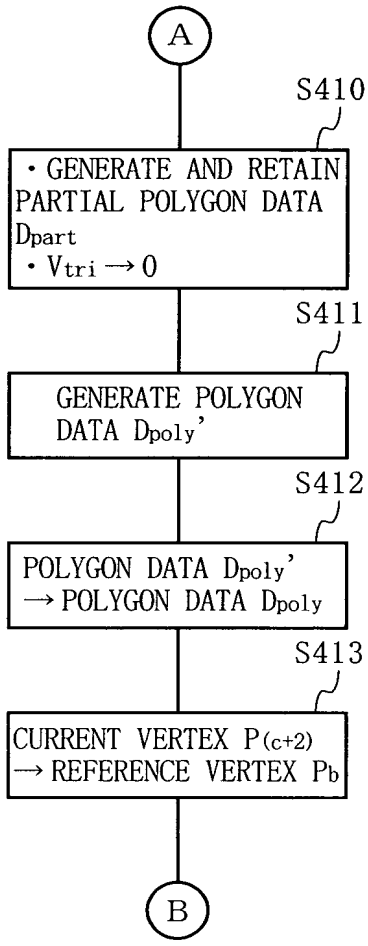

POLYGON DIVISION PROCESS START
S401
SELECT REFERENCE VERTEX Pb
B
S402
SELECT TWO VERTEXES Pc AND P(c+1)
S36
S403
No
DOES △Pb Pc P(c+1) CARRY, IN AND ON, NO OTHER VERTEX Pi, AND IS ∠Pb Pc P(c+1) CONVEX ?
Yes
S404
・REGISTER VERTEXES Pb, Pc, AND P(c+1)
・Vtri → ⌈+1⌋
S405
S409
Yes
Vtri=(n-2) ?
VERTEX P(c+2) → P(c+1)
S414
No
S406
S408
GENERATE AND RETAIN PARTIAL POLYGON DATA Dpart
SELECT REFERENCE VERTEX Pb, AND TWO VERTEXES P(c+1) AND P(c+2)
・ADDITIONALLY REGISTER VERTEX P(c+2)
・Vtri → ⌈+1⌋
S407
RETURN
DOES △Pb P(c+1) P(c+2) CARRY, IN AND ON, NO OTHER VERTEX Pj, AND IS ∠Pb P(c+1) P(c+2) CONVEX ?
Yes
No
A

FIG. 5


A
S410
・GENERATE AND RETAIN PARTIAL POLYGON DATA Dpart
・Vtri → 0
S411
GENERATE POLYGON DATA Dpoly'
S412
POLYGON DATA Dpoly' → POLYGON DATA Dpoly
S413
CURRENT VERTEX P(c+2) → REFERENCE VERTEX Pb
B

S36

FIG. 6A

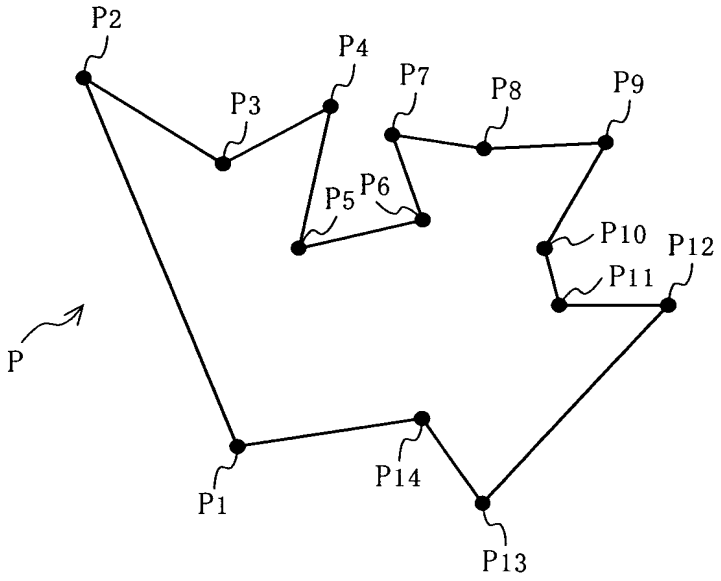

P2
P4
P7
P8
P9
P3
P5
P6
P10
P12
P11
P
P1
P14
P13

FIG. 6B

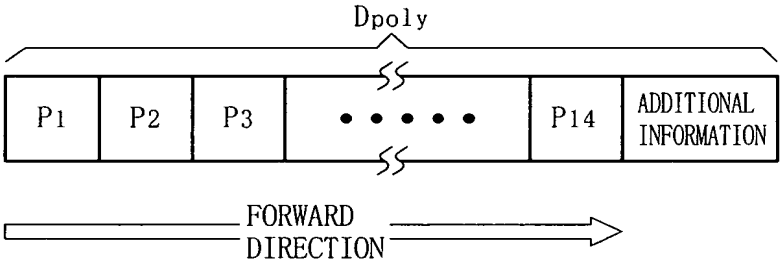

Dpoly
P1
P2
P3
P14
ADDITIONAL INFORMATION
FORWARD DIRECTION

FIG. 7A

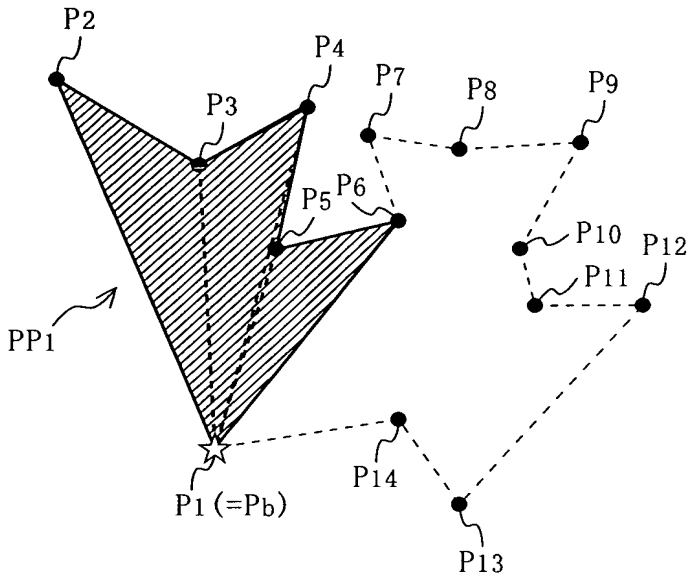

P2
P4
P7
P8
P9
P3
P5
P6
P10
P12
P11
PP1
P14
P1 (=Pb)
P13

FIG. 7B

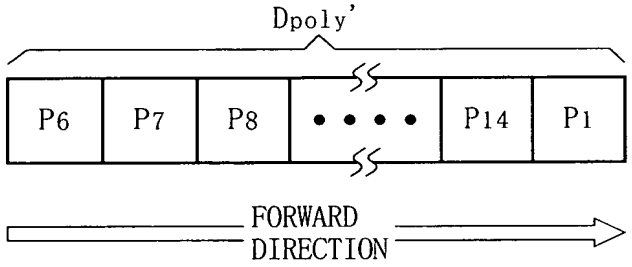

Dpoly'
P6
P7
P8
P14
P1
FORWARD
DIRECTION

FIG. 8A

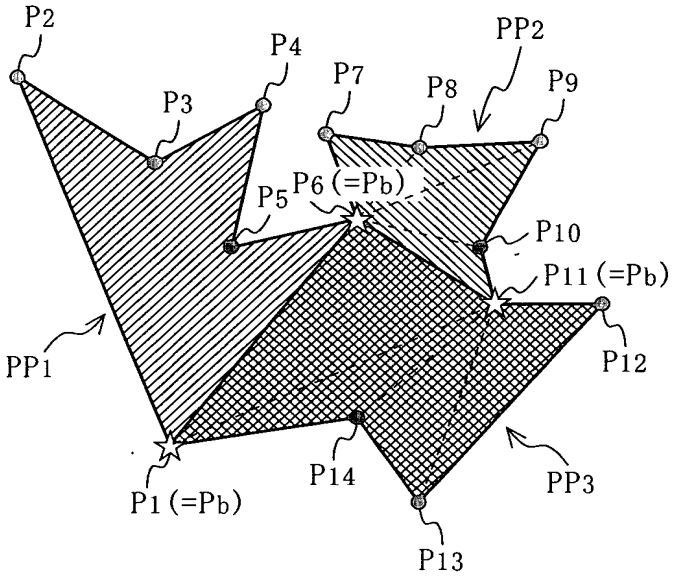

P2
P4
P3
P7
P8
PP2
P9
P5
P6 (=Pb)
P10
P11 (=Pb)
PP1
P12
P1 (=Pb)
P14
PP3
P13

FIG. 8B

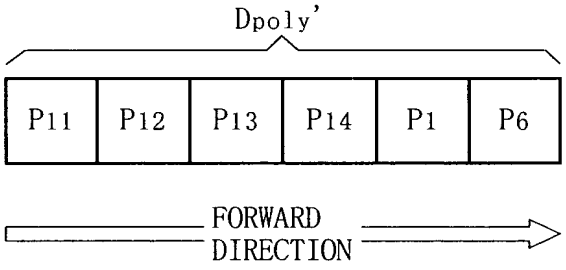

Dpoly'
P11
P12
P13
P14
P1
P6
FORWARD
DIRECTION

FIG. 9

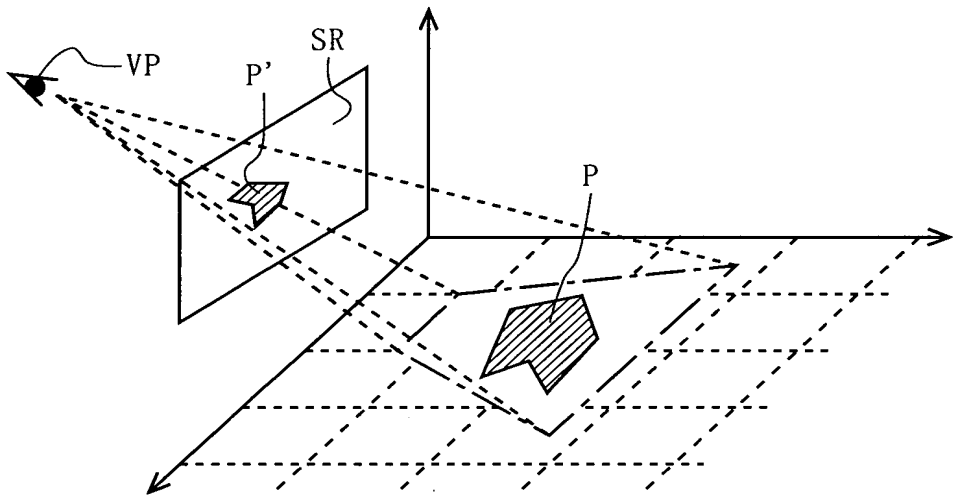


FIG. 10A

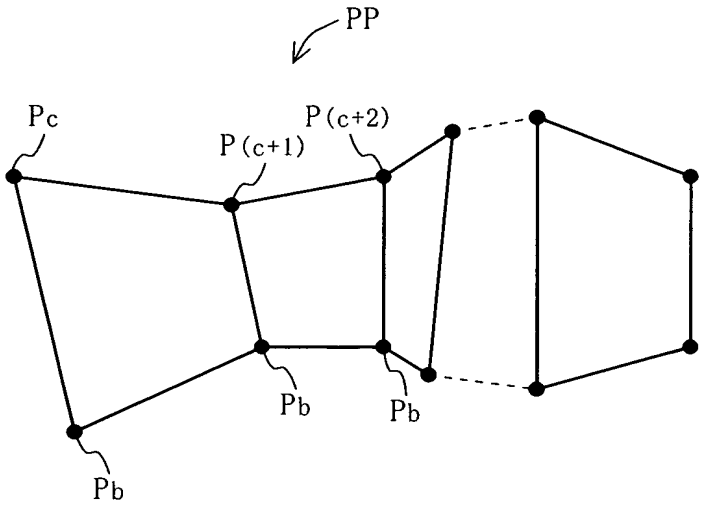



FIG. 10B

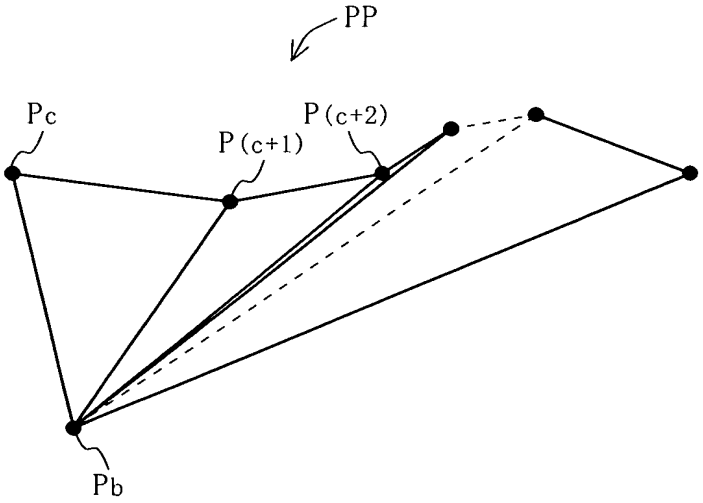


FIG. 11 PRIOR ART

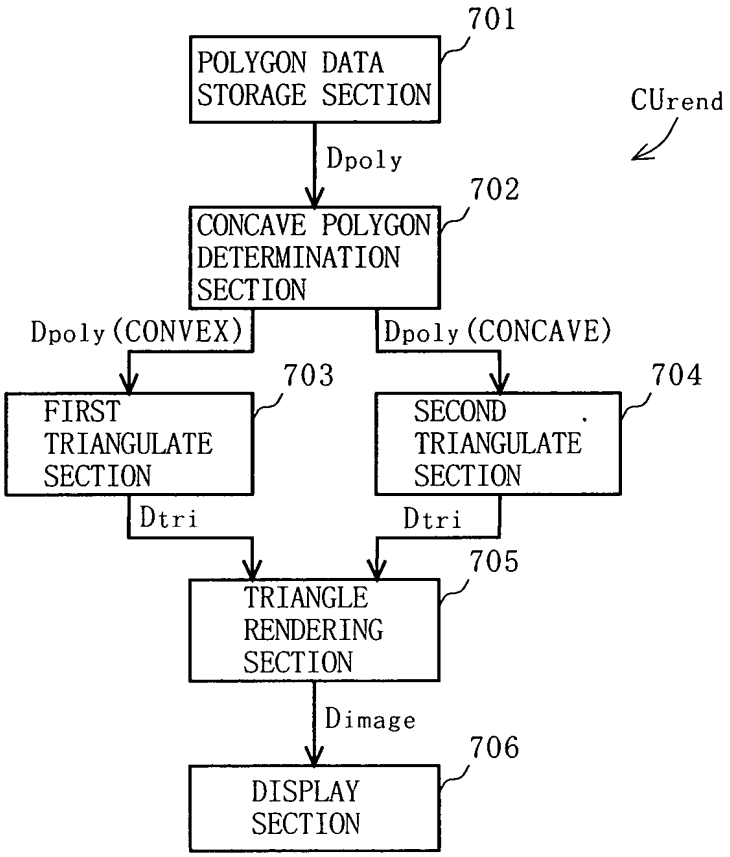


FIG. 12 PRIOR ART

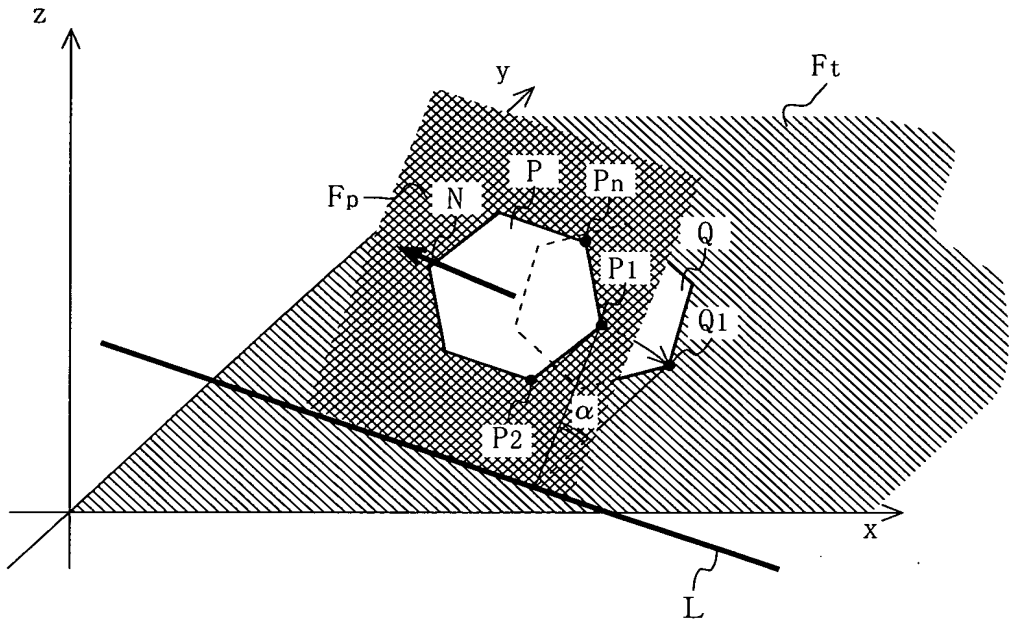



FIG. 13 PRIOR ART

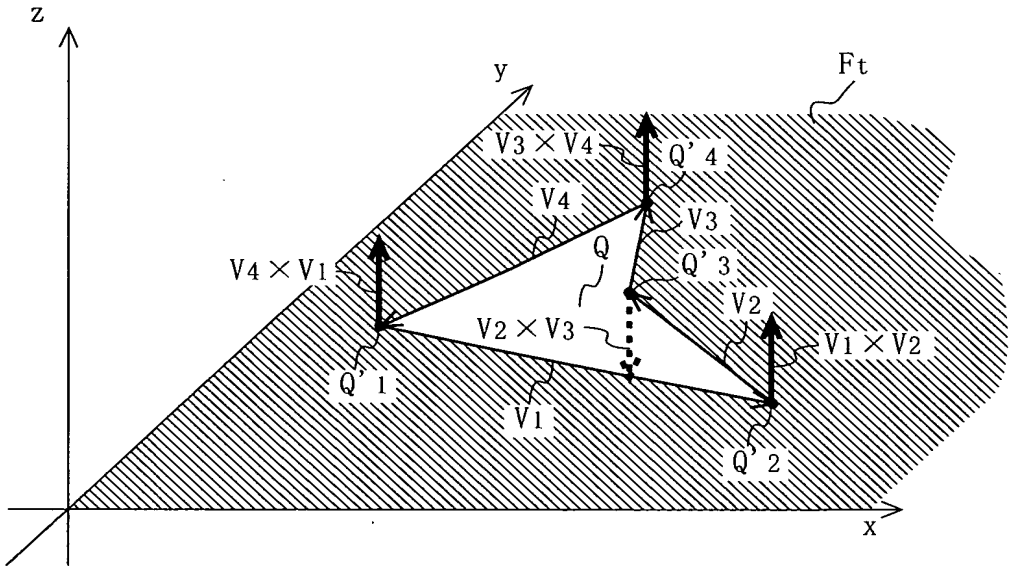


FIG. 14 PRIOR ART

